

REMARKS/ARGUMENTS

The action by the Examiner of this application, together with the cited references, has been given careful consideration. Following such consideration, claims 1, 10, 11-13, 22-24, 45, and 58-59 have been amended to define more clearly the patentable invention applicant believes is disclosed herein. Claims 8-9, 20-21, 25-44, and 55-57 were canceled in the previous amendment. Claims 2-7, 14-19, 46-54, and 60 are unchanged by the present amendment paper. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments, and allow the application.

The Examiner has withdrawn the previous indication of allowability for claims 8, 9, 55, and 56. Claims 1-3, 10-12, 22-24, 45-51, and 58-60 are now rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,631,333 to Lewis et al. (hereinafter "Lewis"). Furthermore, claims 1-5, 10-17, 22-24, 45-52, and 58-60 have been rejected under 35 U.S.C. 103(a) as being obvious in view of the combined teachings of U.S. Patent No. 5,352,574 to Guiseppi-Elie and Lewis. Claims 6-7, 18-19, and 53-54 have been rejected under 35 U.S.C. 103(a) as being obvious in view of the combined teachings of Guiseppi-Elie '574, Lewis, and U.S. Patent No. 5,651,922 to Nahass et al. It is respectfully submitted that none of the cited references, taken individually or in combination, teaches or suggests the Applicant's invention as set forth in the presently amended claims.

The independent claims (i.e., claims 1, 13, and 45) have been amended as follows:

Independent claim 1 now recites:

An apparatus for sensing a *concentration of vaporized hydrogen peroxide* in a biocontamination deactivation process, comprising:

a sensing element comprised of an electroactive material, wherein said sensing element is exposed to vaporized hydrogen peroxide inside a chamber, said vaporized hydrogen peroxide effecting biocontamination deactivation;

means for determining a measured value indicative of a change in an electrical property of the electroactive material as a function of time exposure of the electroactive material to the vaporized hydrogen peroxide in the chamber, wherein said change in the electrical property varies in accordance with a change in the *concentration of the vaporized hydrogen peroxide* in the chamber;

memory means for storing predetermined data indicative of said electrical property as a function of time exposure of the electroactive material to *vaporized hydrogen peroxide at known concentrations*; and

means for determining a *concentration of the vaporized hydrogen peroxide* corresponding to the measured value using the predetermined data stored in said memory means.

Independent claim 13 now recites:

A method for sensing a *concentration of vaporized hydrogen peroxide* during use in a biocontamination deactivation process, the method comprising:

exposing a sensing element to vaporized hydrogen peroxide inside a chamber, wherein said sensing element includes an electroactive material;

determining a measured value indicative of a change in the electrical property of the electroactive material as a function of time exposure of the electroactive material to the vaporized hydrogen peroxide inside the chamber, wherein said change in the electrical property varies in accordance with a change in the *concentration of the vaporized hydrogen peroxide* in the chamber;

storing in memory predetermined data indicative of said electrical property as a function of time exposure of the electroactive material to *vaporized hydrogen peroxide at known concentrations*; and

determining a *concentration of the vaporized hydrogen peroxide* corresponding to the measured value using the predetermined data stored in said memory.

Independent claim 45 now recites:

A method for sensing a *concentration of a chemical component* in a chamber during a biocontamination deactivation process, the method comprising:

exposing a sensing element to the chemical component inside the chamber, wherein said sensing element includes an electroactive material;

determining a measured value indicative of a change in the electrical property of the electroactive material as a function of time exposure of the electroactive material to the chemical component inside the chamber, wherein said change in the electrical property varies in accordance with a change in the *concentration of the chemical component* in the chamber;

storing in memory predetermined data indicative of said electrical property as a function of time exposure of the electroactive material to the *chemical component at known concentrations*; and

determining a *concentration of the chemical component* corresponding to the measured value using the predetermined data stored in said memory.

It is respectfully submitted that none of the cited references, taken individually or in combination, teaches or suggests the foregoing limitations recited by independent claims 1, 13, and 45.

Lewis is directed to a chemically sensitive sensor that generates a detectable signal, pattern, or fingerprint upon exposure to an *odorant*. In particular, Lewis is directed to a method and apparatus for *identifying* olfactory information (e.g., identifying or classifying an odor present in a patient's breath). The presence of an analyte is detected based on changes in a detectable signal from at least one sensor.

It is respectfully submitted that the Examiner has overlooked the fact that the claimed invention is not directed to detecting the *presence* of vaporized hydrogen peroxide or a chemical component, but rather is directed to determining the *concentration* of the vaporized hydrogen peroxide or chemical component. The claimed invention is not directed to *identification* of a chemical present in proximity to the sensor, but rather is directed to determining the *concentration* of a specific chemical component (e.g., vaporized hydrogen peroxide) that is in the proximity of a sensing element.

It is respectfully submitted that nowhere does Lewis teach or suggest a method or apparatus that can be used to determine a *concentration* of a particular chemical component, such as vaporized hydrogen peroxide. Lewis repeatedly refers to detecting the *presence* of a particular analyte. It does not provide any teaching or suggestion for determining the *concentration* of the analyte that is actually determined to be present.

It is acknowledged that Lewis discloses a computer system 300 that is a general purpose system comprising a processor 305 and one or more internal data storage components 310 for storing data, and one or more data retrieving devices for retrieving the data stored on the data storage components. However, Lewis fails to teach or suggest "a memory means for storing

predetermined data indicative of said electrical property as a function of time exposure of an electroactive material to vaporized hydrogen peroxide at known **concentrations**; and a means for *determining a concentration* of the vaporized hydrogen peroxide corresponding to the measured value using the predetermined data stored in said memory means,” as required by independent claim 1. Furthermore, it is respectfully submitted that Lewis fails to teach or suggest the step of “storing in memory predetermined data indicative of said electrical property as a function of time exposure of the electroactive material to a vaporized hydrogen peroxide at known **concentrations**; and *determining a concentration* of the vaporized hydrogen peroxide corresponding to the measured value using the predetermined data stored in said memory,” as required by independent claim 13. Likewise, it is respectfully submitted that Lewis fails to teach or suggest the steps of “storing in memory predetermined data indicative of said electrical property as a function of time exposure of the electroactive material to the chemical component at known **concentrations**; and *determining a concentration* of the chemical component corresponding to the measured value using the predetermined data stored in said memory,” as required by independent claim 45.

The Examiner argues that Lewis teaches that during the process for detection of an analyte, a response profile is generated continuously over time. The Examiner comments as follows:

Lewis further teaches that the (sic) during the process for the *detection of an analyte*, a response profile is generated continuously over time (see col. 7, lines 8-65). Hence, it is inherently anticipated that electrical conductivity versus time response curve, and including the slope of the curve, will change for each sensor. Lewis also teaches the use of stored characteristic response patterns saved in a library for *identifying* different target analytes (see col. 10, lines 21-35). (Emphasis added.)

As indicated above, Lewis is directed to “identifying” an analyte, not to **determination of concentration**. Accordingly, Lewis does not store or access data that can be used to determine concentrations.

It is respectfully submitted that the specific apparatus having “memory means” and “means for determining a concentration of vaporized hydrogen peroxide,” as defined by

independent claim 1, and the method steps of storing specific types of predetermined data in memory and determining the concentration of vaporized hydrogen peroxide using the predetermined data stored in memory, as required by claims 13 and 45, are neither taught nor suggested by Lewis.

The Examiner has further commented in the Office Action that “Lewis teaches all of the positively recited structural limitations of the claimed apparatus. The recitation that the sensing apparatus is utilized for the *detection* of vaporized hydrogen peroxide *inside of a chamber* is considered a process or intended use limitation.” It appear that the Examiner has misconstrued the claimed invention as being directed to “*detection* of vaporized hydrogen peroxide inside of a chamber.” As discussed above, the claimed invention is directed to determining the *concentration* of vaporized hydrogen peroxide or a chemical component inside of a chamber in connection with a biocontamination deactivation process.

Nowhere does Lewis teach or suggest using the sensing device disclosed therein for the purpose of determining a *concentration* of vaporized hydrogen peroxide or chemical component used in a biocontamination deactivation process, as required by the present claims.

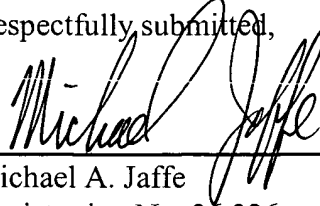
It is respectfully submitted that Guiseppi-Elie ‘574 and Nahass et al. ‘922 also fail to teach or suggest the limitations of the independent claims discussed above.

In view of the foregoing, it is respectfully submitted that claims 1, 13, and 45, as well as the claims that depend therefrom, are patentable over the prior art of record.

It is respectfully submitted that the present application is now in proper condition for allowance. If the Examiner believes there are any further matters that need to be discussed in order to expedite the prosecution of the present application, the Examiner is invited to contact the undersigned.

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0537, referencing our Docket No. ST8010US.

Respectfully submitted,



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I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: September 15, 2005


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